of the first year, six months *after* it assumes revenues will begin to be generated. In reality, of course, startup costs -- which we will discuss in greater detail below -- would be incurred by a competitive entrant long *before* it can expect to generate revenues. CLECs will incur expenditures for collocation, switch deployment, other construction, marketing, and systems development (including designing and deploying systems that will interface with yet-to-be-developed BellSouth OSS systems), and the employees required to perform and manage these functions. A significant amount of these expenditures will occur well before they start to acquire customers. In particular, because BellSouth (like other ILECs) does not have a usable electronic ordering and provisioning system for UNEs today, the required lead time is even longer. In addition, CLECs will need to test fully-operational facilities and systems, and order collocation arrangements well before the first customer comes on-line. Nevertheless, the TM makes the assumption that no expenditures would be made until six months *after* the business starts generating revenues. This is absurd.

40. The TM also ignores the issue of timing (*i.e.*, lag between cash outflows and revenues) in calculating the cash flows associated with purchasing UNEs and paying non-recurring charges ("NRCs"). Although the model developers apparently recognize that expenditures for provisioning UNEs would be incurred in advance of obtaining customers, the TM completely ignores this revenue lag when developing the cash flows. Page 10 of BellSouth's February Ex Parte states "[n]ormal ordering and inventory procedures (e.g., the CLEC will generally order several DS-1s at a time to cover its forecasted needs for some future interval) should keep the number of provisioning events to a minimum for DS-1 lines and associated cross-connects." Contrary to this statement, the actual calculations used in the model assume that the CLEC will *not* pre-order significant quantities of the various UNE's modeled

but, instead, will incur these costs only as the demand develops (*i.e.*, as revenue-generating customers are being added to the CLEC's system).

41. In addition, the TM fails even to incorporate the time lags built into BellSouth's SGAT offering for collocation applications. Section 3 of BellSouth's SGAT sets forth the steps that a CLEC must complete in order to obtain collocation:

- 1. "[a] proposed equipment layout and an application fee must accompany each Application Inquiry as indication of a bona fide request."
- 2. "BellSouth will respond to ... up to five (5) Physical Collocation Application Inquiries within 30 business days of a complete [Application Inquiry]".
- 3. "[r]equesting collocators will have 30 days to review BellSouth's written response to the Application Inquiry and submit a complete and accurate Firm Order for each location for which the collocator wishes to proceed. A detailed equipment drawing must accompany the Firm Order request along with pre-payment of applicable fees in order for the request to be Bona Fide."
- 4. "BellSouth will complete Physical Collocation space when construction is under ordinary conditions within 120 calendar days of receipt of complete and accurate Bona Fide Firm Order."

42. Thus, BellSouth's SGAT Collocation offerings require that the CLEC pay the collocation application fees at least six months before, and the other NRCs approximately four months before BellSouth completes construction of the collocation space. When completed, the space is turned over to the CLEC, who in turn requires time to provision the necessary CLEC equipment in the collocation space. All of these must be completed in each of the 108 wire centers in the Atlanta LATA before the CLEC would be able to offer any service. In summary, the TM fails to include *any* of these "real-world" lags between costs and revenues in the cash flow calculations. The effects of these omissions, alone, are quite significant.

43. The TM also substantially understates costs in Year 1 of its cash flows. The

model's calculations use a mid-year convention when calculating the internal rate of return. The model calculates Year 1 revenues and expenses by using the *average* lines in service during this year.[17] This method provides a rough approximation of the revenues and operating expenses that would be incurred in Year 1, but substantially understates the construction costs and NRCs that would be experienced in Year 1, because the model calculates these cash outflows as if only one-half of the construction costs and NRCs required for total lines in service in Year 1 are actually incurred in that year. The TM methodology allocates all construction costs and NRCs that occur in the second half of the first year to the following year. In other words, not only does the TM ignore the lag between cash outflows and cash inflows, it understates the cash outflow required in Year 1.

44. In any cash flow model, the timing of cash flows is a significant determinant of the resulting rates of return. When cash outflows are experienced well in advance of revenues, the overall internal rate of return is reduced, because the present value of revenues is decreased by more than the present value of investments and annual expenses. The TM completely ignores the reality that for new local entrants, revenues will substantially lag expenditures. This fact, alone, demonstrates that SPR's stated objective of making conservative (*i.e.*, high-cost) assumptions is nothing but rhetoric.

45. Support for the fact that up-front cash flows for new entrants are high is found in the public financial disclosures filed by CLECs certified to do business in Georgia. MCG Communications, in its SEC Form 10-Q for quarter ending 9/30/98, states that:

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[17] The TM generally assumes that the CLEC will gain approximately 1.11% of BellSouth's lines per year except for Year 1, in which the Model assumes one-half this penetration rate, representing average lines held during the year for cash flow purposes.

> [a]s the company expands into new markets, both costs of operating revenues and selling, general and administrative costs are expected to increase as many of the fixed costs of providing service in new markets are incurred *before* significant revenue can be generated from those markets. (emphasis added)

Similarly, Level 3's Form SEC 10-Q for quarter ending 9/30/98 states that:

> [t]he development of the Business Plan will require significant capital expenditures, a substantial portion of which will be incurred *before* any significant related revenues from the Business Plan are expected to be realized. These expenditures, together with the associated early operating expenses will result in substantial negative operating cash flow and substantial net operating losses for the Company for the foreseeable future. (emphasis added)

Obviously, the CLECs currently competing in the local exchange market have experienced significant lags between initial cash outflows and the point at which revenues are eventually realized. SPR and BellSouth have completely ignored this fact of life in constructing the TM.

46. SG&A Expenses. The TM improperly assumes that Sales, General, and Administrative (SG&A) expenditures for CLECs reasonably can be calculated as a constant percentage of revenues. Specifically, the TM *currently* assumes that SG&A expenses are equal to 25% of revenues.[18] While such a generalized approximation of SG&A expenses *might* be acceptable for an ongoing telecommunications company, it clearly is not reasonable for a competitor seeking entry into local exchange markets for the first time. For example, as noted above, sales and marketing and other administrative expenditures will have to be incurred well before revenue can be earned. Moreover, the fixed costs of such investment will be a substantially higher proportion of revenues for a new entrant during the early stages of its market entry.

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[18] As noted earlier, version 1.1 of the TM stated that "we have developed results assuming that the so-called SG&A expenses are equal to 30 percent of revenues, a ratio which is typical of communications carriers." Even if it were correct to estimate CLEC SG&A expenses using such (continued . . .)

47. Thus use of an "industry average" SG&A percentage factor for CLECs in the early stages of market entry understates costs for at least two reasons. First, a new entrant will not be able to generate the economies of scale and scope that incumbents such as BellSouth enjoy.[19] Thus, many new incumbents are likely to experience SG&A ratios higher than those that are "typical of communications carriers." Even if a CLEC is a large long-distance company, such as AT&T or MCIWorldCom, the decision to enter the local market must be made on the basis of the cash flows associated with that decision -- and high up-front SG&A expenses can be expected, when these companies seek to enter local markets, relative to the revenues associated with entry. Second, new entrants typically would experience much higher SG&A ratios in the early years, when revenues are low or non-existent, and would only expect those ratios to decline and stabilize over the long-run.

48. Again, the support for these statements can be found in public financial disclosures filed by CLECs certified to do business in Georgia. Allegiance Telecom, in its SEC Form 10-Q for quarter ending 9/30/98, states that:

> [t]he Company plans to employ a large direct sales force in each market and to build a national sales force as the Company grows. To attract and retain a highly qualified sales force, the Company offers its sales and customer care personnel a compensation package emphasizing commissions and stock options. The Company expects to incur significant, and increased, selling and marketing costs as it continues to expand its operations. In addition, Allegiance plans to offer sales promotions to win customers, especially in the first few years as it establishes its market presence.

Similarly, MCG Communications, in its SEC Form 10-Q for quarter ending 9/30/98 states that:

(. . . continued)
a ratio, the TM sponsors have not explained why they have reduced the 30 percent ratio that is "typical of communications carriers" to 25 percent.

[19] Hubbard/Lehr/Willig Aff. ¶¶ 20-21.

significant levels of marketing activity are anticipated in new markets in order for the Company to build its initial base of customers.

49. Data for these CLECs show that the SG&A expense-to-revenue ratio of 25 percent employed in the TM is unrealistic. Attachment 3 shows that, for thirteen CLECs currently operating in Georgia, 30 percent is the *lowest* SG&A to revenue ratio for any of these companies. The average SG&A expense-to-revenue ratio for these new entrants into the local services market is approximately 55 percent. In addition, average data for these companies shows that SG&A expenses as a percent of revenue has increased slightly from 1997 to 1998, illustrating that SG&A expenses for a new entrants often increases initially, and declines slowly in subsequent years.

50. Undepreciated Plant. The TM analyzes cash flows for a period of five years, which is reasonable. However, it includes an unrealistic assumption that the undepreciated plant investment remaining at the end of this five-year period can be sold at book value (*i.e.*, treated as a positive cash flow). This has the effect of artificially overstating the internal rate of return and the net present value of entering local markets. This assumption is unwarranted because (1) it is highly unlikely that these assets could be disposed of for net-salvage values so high, and (2) the model, as we note below, improperly understates annual depreciation costs and, therefore, overstates the undepreciated value of the property at the end of Year 5.[20]

51. If one is going to assume some form of positive cash flow associated with a CLEC's assets at the end of the discounted cash flow ("DCF") period, the proper approach would be to reflect the after-tax cash that actually could be expected to be generated either by (1)

[20] The SPR assumption that all undepreciated capital could be disposed of at its net book value is at logical odds with claims made by ILECs that competition in local telecommunications may cause their capital plant to become "stranded."

disposing of the assets at that point in time (at market value, net of any costs of disposition), or (2) continuing to operate those assets.[21] This after-tax market value would be affected by the economic life of the assets, the rate of inflation, the future revenue-generating potential of the assets (which, in turn, would reflect relative expectations of declining revenues as markets become more competitive), and the tax laws. One approach would be to extend the analysis to the full economic life of investments required, recognizing that revenues will continue to be reduced to full economic cost by increasing competitive pressures. If asset disposition is assumed, the cash flow analysis must reflect a *realistic* estimate of the *after-tax* cash that would be generated by selling the assets. If BellSouth successfully defends its markets, any CLEC capital would have value close to zero.

52. Thus, the accounting approach employed by the model to calculate an end-of-study period positive cash flow is incorrect, in the context of a discounted cash flow analysis, because it does not reflect either the present value of future cash flows or the real market value of the assets. This is a good example of the shortcuts that SPR has taken in designing the TM. This shortcut overstates the return that a CLEC could realistically expect from entering the local market.

53. Operating Expenses. The TM results display three categories of SG&A, *i.e.*, "SG&A: customers acquisition expenditures," "SG&A: start-up expenditures," and "SG&A:

[21] As its name makes clear, discounted cash flow analysis includes *only* actual cash flows. Non-cash flow accounting entries, such as depreciation, have no place in a cash flow analysis. Thus, any credit at the end of Year 5 would have to reflect an estimate of the actual cash that would be obtained – on an after-tax basis – by disposing of the assets. In making these calculations, one would have to take into account the fact that certain portions of the accelerated depreciation for tax purposes (which a CLEC could use to reduce annual tax liability in the early years of the CLEC's existence) would be subject to recapture if assets were disposed of early. This, in turn, would increase overall tax liability at the end of the five-year period.

other expenses." While the "start-up" category is not defined, the "customer acquisitions" category is defined as "marketing effort, whether by direct marketing or mass marketing, that is expended to capture a customer." For the "customer acquisition" and "start-up" categories of SG&A, the TM assumes that the CLEC would (1) capitalize the entire expenditure, and (2) recover the undepreciated portion of these expenditures as a positive cash flow at the end of the five-year time horizon. This treatment is wrong. In the first place, most of these SG&A expenditures would be expensed, rather than capitalized.[22] Under these circumstances, there would be no depreciation required, and no "undepreciated" portion of acquisition expenditures and start-up expenditures as capital assets. The issue of the proper *accounting* treatment is a red herring, however. The relevant issue is whether any of these expenditures retain marketable value at the end of Year 5. Almost certainly, any buyer of CLEC assets at the end of Year 5 will have to incur (or already will have incurred) the same SG&A expenditures. As a result, it is unlikely that an existing CLEC would be able to recover any portion of marketing and start-up expenditures made previously.

54. Depreciation. The model erroneously calculates annual depreciation and net plant investment (the difference between original cost and accumulated depreciation). The TM incorrectly multiplies the annual depreciation rate by *net* investment, rather than the original

[22] From a cash flow stand-point, an expenditure is a negative cash flow regardless of whether it is expensed or capitalized. The only effect on cash flows is a tax effect -- expenses are fully-deductible for tax purposes when they are spent, while capitalized items are deductible only as tax depreciation is taken. From a discounted cash flow perspective, therefore, treating an expenditure as an expense generally results in a higher IRR, because the tax deduction occurs immediately, reducing the present value of taxes paid. Here, SPR ignores taxes and manages to improve IRR by treating these expenditures as capital items. This anomolous result occurs because SPR incorrectly assumes that it can convert the "undepreciated" portion of these expenditures to a positive cash flow at the end of Year 5.

gross investment in the assets. The effect of this error is to understate annual depreciation, and to ensure that the CLEC plant would *never* be fully depreciated. In addition, this error causes the TM to show much higher net plant remaining at the end of the model's five year time horizon than would be shown if depreciation had been properly calculated.[23] The following table uses a simplified example to demonstrate this error, assuming an initial investment of $1,000 and a ten-year asset life:

	Correct Calculation of Depreciation			SPR's Incorrect Calculation of Depreciation		
Year	Initial Inv.	Deprec.	Undepr. Inv.	Initial Inv.	Deprec.	Undepr. Inv.
1	$1,000	$100	$900	$1,000	$100	$900
2	$900	$100	$800	$900	$90	$810
3	$800	$100	$700	$810	$81	$729
4	$700	$100	$600	$729	$73	$656
5	$600	$100	$500	$656	$66	$590

In this simple example, it is obvious that the "correct" methodology would result in the asset being fully-depreciated at the end of its 10-year life, while the approach used by SPR would fail to fully-depreciate the asset over its economic life. In addition, at the end of five years, the SPR methodology has overstated the undepreciated asset value of the hypothetical asset by nearly 20 percent.

[23] Because the TM treats the remaining net plant as a positive cash flow at the end of the five-year period, the erroneous understatement of annual depreciation causes the model to show a much higher undepreciated asset base, which the model then inappropriately converts to a positive cash flow at the end of Year 5. This overstated positive cash flow, in turn, causes the TM to calculate overstated internal rates of return.

55. Traffic Volumes. The traffic volume (or load) that the TM calculates for each local switch is determined by an input parameter that the model contains for each CO. No documentation describing the derivation of these wire center-specific values has been provided, so it is impossible to interpret or evaluate these figures. In the TM, the amount of load affects costs, because the need for transport between each BellSouth wire center and the closest CLEC POP varies in direct proportion to the line penetration that is assumed for the CLEC.[24] However, as noted earlier, the TM assumes that targeting high-revenue customers revenue will *not* increase the average load per customer. As a result, the load assumptions in the TM are at odds with the revenue assumptions if the user employs the option to target particular customers.

56. Taxes. Importantly, the TM makes no provision for taxes. This creates a number of problems. Disposition of assets (which the TM appears to assume at the end of the five-year DCF period) would be a taxable event (if the salvage value exceeded the cost of disposition). As a result, while the model results are clearly intended to be pre-tax (because no provision is made anywhere in the model for tax liability) it is difficult to interpret the results, because all of the relevant cash flows are not included. Omitting taxes could overstate returns by as much as 67 percent, using the model's most profitable assumptions, and failure to include the effects of taxes means that the resulting internal rates of return are not comparable to returns observable in the real world, which are after-tax.

57. There also are problems with the way in which the DCF approach is implemented in the TM. The model uses an internal rate of return ("IRR") approach in displaying the alleged

[24] The amount of load computed by the TM also varies by wire center, based on the mix of residential and business customers.

profitability of CLEC entry into the local exchange market in Atlanta.[25] Under the model's IRR approach, entry into a market would be considered "profitable" if the IRR exceeds an appropriate cost of capital.[26] However, use of the internal rate of return approach has fallen into disfavor over the years for two good reasons. First, there can be multiple rates of return that cause the present value of all cash flows to be equal to zero.[27] The second is a more fundamental defect in the IRR approach, which is particularly problematic when a model solves for rates of return as high as those calculated by SPR. The IRR approach implicitly assumes that any funds returned to equity investors (*i.e.*, dividends received, etc.) will be reinvested by the equity investor at a rate of return equal to the internal rate of return generated by the model. In other words, the IRR approach used in the TM assumes that as investors recover the capital that is initially invested in CLEC entry into the local exchange market, these investors will be able to reinvest that capital in *other* projects generating returns of 40% to 180%. Because such reinvestment opportunities are unlikely, the IRR approach significantly overstates the returns to investors.

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[25] The internal rate of return is the discount rate (or rates) that will cause the present value of the project's cash inflows and outflows to equal zero.

[26] Of course, because the model has failed to treat either inflation or tax liability explicitly or accurately, it is difficult to conceive how one would develop an estimate of the cost of capital that could be compared to the results produced by the TM.

[27] Mathematically, it can be demonstrated that the number of solutions to an internal rate of return calculation is equal to the number of times annual cash flows shift from negative to positive or positive to negative. Thus, if cash flows start out negative, turn positive, and remain positive over the life of the project, then IRR will solve for a single rate of return. But if cash flows go from negative, to positive, and then negative again, there will be two IRR solutions, each of which renders the present value of cash flows zero. For relatively long-lived assets, where there will periodically be negative cash flows as assets are replaced, the IRR approach could generate numerous internal rates of return. In addition to the above problems, the TM improperly has $0.00 investment at Year 0 of the cash flows (because it moves the start-up costs to the mid-year of Year 1), causing yet another possible solution to the IRR calculation.

58. Financial analysts generally favor the net present value ("NPV") approach. Under this approach, all of a project's cash flows are discounted at an appropriate cost of capital. If the net resulting present value is greater than zero, the project is deemed an acceptable investment, because it is capable of generating returns in excess of the cost of capital. An important advantage of the NPV approach is that, unlike the IRR, it assumes that any capital returned to equity investors is reinvested in projects that will generate rates of return equal to the cost of capital. In our revisions to the TM, described below, we provide results using the NPV methods.

59. The TM also takes an overly-simplistic view of collocation costs and requirements. While the model configuration appears to comport with BellSouth's SGAT offering for cageless collocation, it assumes that a single, inexpensive configuration will work in all COs. For example, the TM assumes that each CO in Atlanta will operate exclusively with DSX cross-connects, not DCS systems. However, many COs currently employ the more sophisticated DCS cross-connects, which cost significantly more than DSX.

60. The TM also fails to reflect the full mix of UNEs and NRCs that may be required to generate the revenues that the model assumes. For example, SPR has not included any costs associated with: 2-Wire Analog Loops - Level Two; 4-Wire Analog loops; 2-Wire ISDN Loops; 2-Wire ADSL Loops; 2-Wire HDSL Loops; 4-Wire HDSL Loops; 4-Wire DS1 Loops; 4-Wire 56 or 64 Kbps Loops. To the extent that TM's revenue inputs reflect revenues generated by any of these loop types, the model understates costs by failing to include a portion of these more expensive loops in its calculations.[28] In addition, SPR has omitted all costs associated with Manual Service Orders, Manual Order Coordination and Order Coordination for Specified

[28] Without detailed information on TM's revenue inputs, we are unable to resolve this issue.

Conversion Time. These are additional NRC costs that would be incurred to ensure existing customers are affected as little as possible in changing local providers, and would significantly increase the costs to provide service to each new customer.

61. Finally, SPR made certain modification to the algorithms in version 1.3 of the model that are incorrect, serve to understate costs, and which effectively offset correction of the understated UNE rates that were employed in earlier versions of the model. These calculations understate the amount of investment and NRCs that the model computes by subtracting, from the incremental investment the model calculates for Years 2 through 5, the investment made in Year 1. This methodology understates required investment in Years 2 through 5, because the investment in Year 1 was never included, to begin with, in the Year 2 through Year 5 investments calculated by the model.

V. THE MODEL INCLUDES INPUT ERRORS AND UNSUPPORTED, BUT APPARENTLY INCORRECT, DATA

62. In addition to the defects outlined in Sections III and IV, there are a number of unsupported or erroneous values in the TM input data that serve to understate the costs that CLECs would incur to enter the local exchange market.

A. The TM Cannot Be Relied Upon Because Inputs to The Model Are Not Fully Disclosed

63. Many of the key inputs in the TM are not auditable or documented, and it is difficult to examine the model without a complete understanding of what SPR intends the inputs to represent. For example, the TM relies upon "volume" inputs for each of the 108 BellSouth wire centers in the Atlanta LATA. No explanation has been provided for what these figures represent. Furthermore, in Version 1.1 these volume figures were used, directly, to calculate the

CLECs' transport requirements. In versions 1.2 and 1.3, however, the program multiplies these same volume figures by two before making subsequent calculations, without any explanation of why this change was made.

64. Similarly, as noted earlier, the revenue inputs -- a key determinant of the internal rates of return that result from running the TM -- are a virtual black box. The model documentation is silent on the source of its revenue data. Although the BellSouth Ex Parte states that "[t]he revenues to be realized by the CLEC ... will include all local, intraLATA, and vertical service revenues as well as interLATA access charges . . . [excluding] private line, terminal equipment, inside wire, or any other revenue which depends on equipment or facilities which are not included in the cost model," neither BellSouth nor SPR has provided any detail supporting the derivation of revenue assumptions actually used in the TM. As we discuss in more detail, below, uncertainty about TM's revenue assumptions renders the model unreliable.

B. Where Review is Possible, Many of The Model's Input Assumptions Are Internally Inconsistent And Erroneous

65. The following is a partial list of problems that we have been able to identify with the TM's input assumptions, in spite of the fact that many of them are not well-explained or well-documented:

- The TM inputs include two sets of revenue assumptions, one identified as "total ILEC revenue in area served by CLEC," and the other identified as "Georgia Revenues by Customer Decile." These two sets of inputs cannot be reconciled to each other.
- The TM reflects a total of 1,078,250 business lines for the entire state of Georgia, and 1,082,128 business lines for the Atlanta LATA. This makes no sense.
- The TM uses a figure of $40.96 for average monthly residential revenues per line, including access charges. In the state arbitration in Georgia – when it was to BellSouth's advantage to *understate* this number, BellSouth claimed that the appropriate figure was $35.32, including InterLATA toll revenues. A difference of $5.00 per month per line per month would overstate annual CLEC revenues by more than $10 million at a 5 percent penetration rate.

- The TM suggests that 90 percent of the lines in Georgia are contained in the Atlanta LATA (3,069,270 of the 3,406,270 lines by wire center). Other data sources suggest that the appropriate figure is closer to 75 percent.

C. The TM Inputs Exclude Numerous Elements of Cost That Would Be Incurred by CLECs To Enter The Local Exchange Market

66. A key deficiency in the TM is that it completely ignores numerous costs that would have to be incurred by CLECs to provide competitive basic local service, *i.e.*, that would be required by the CLEC if it hoped to generate *any* of the revenue attributed, by the model, to local entry. Comparison of the Georgia UNE rates and BellSouth's SGAT with the UNEs included in the TM reveals that the Model fails to provide costs for *any* of the following basic functions that would be required by a CLEC in order to provide local service using the architecture assumed by SPR in the TM: (1) access to Toll Free (800) Dialing Databases; (2) access to LIDB Database; (3) access to CCS7 Signaling Transport; (4) access to ILEC's Operations Support Systems; (5) Operator Call Processing; (6) Inward Operator Services; (7) Directory Assistance Call Completion; (8) Number Services Intercept Access Service; (9) Directory Assistance Access Service; (10) Directory Transport; (11) Directory Assistance Database Service; 12) Direct Access to Directory Assistance; and (13) Selective Routing. In addition, SPR has included no inputs to cover the costs CLECs would have to pay for permanent local number portability.

67. The TM also completely ignores many of the costs that a CLEC would incur to provide its own switches. The TM currently assumes that the only CLEC investment required (*i.e.*, equipment actually owned by the CLEC) would be the collocation bay and the switch. However, a CLEC also would have to provide facilities to house the switch (including HVAC), power the switch, and de-multiplex the signals to the switch. Even if the switch is collocated in

an existing CLEC-owned facility, it is not an appropriate TELRIC approach to assume that these facilities would be available for free. Recognition of the continuing, long-run nature of these costs requires that an appropriate portion of each switch facility's land, building, and power costs be assigned to the switching services required by the CLEC under the TM approach.

VI. CONCLUSION

68. The TM developed by SPR is unreliable for numerous reasons:

- it ignores the effects that competitive pressures would have on the current rate structure (which exhibits higher rates in lower-cost areas, and vice versa);
- it ignores the effects that competitive pressures would have on the future level of exchange and exchange access revenues;
- it assumes new entrants would be able to target only high-contribution customers;
- it ignores obvious revenue/cost correlations;
- it applies SG&A ratios far below those that are being experienced by real-world CLEC entrants;
- it excludes many of the costs that CLECs would incur to enter the local exchange market; and
- it fails to realistically and reliably incorporate existing revenue and line counts in the Atlanta LATA.

These fundamental defects in the model cut across virtually every model computation, and many of them cannot be effectively remedied. Any one of these defects would, standing alone, call the TM's reliability into serious question. The combined effect of all of these defects – each of which tends to overstate revenues and/or understate costs – renders the TM completely useless for its intended purpose.

69. As we have noted throughout this affidavit, many of the fundamental deficiencies in the TM cannot be eliminated, given the current model structure. As a result, the TM is simply

not useable as a vehicle for evaluating the economics of potential entry. However, we have been able to adjust for certain of the deficiencies, and we thought it would be useful for the Commission to see those results, because they provide an indication of how important it is to make realistic assumptions.

70. To do so, we started with the most recent version of the TM filed in this proceeding, version 1.3. Because this version was filed by BellSouth for MCI WorldCom only, we first had to modify the model to reflect inputs for AT&T. This involved (1) using the AT&T points of presence identified by SPR, (2) modifying the long-distance "penetration" assumption from the 60 percent that SPR used for MCI WorldCom to the 30 percent that SPR advocates for AT&T, and (3) eliminating "targeting." The resulting starting point exhibits an internal rate of return of 38.4 percent, and a net present value of $11.0 million.[29]

71. By taking this starting point and *also* eliminating the assumption that long-distance market share would be affected by AT&T's entry into the local Atlanta LATA market, the net present value decreases to $2.7 million. Applying a more realistic set of SG&A ratios than the 25 percent used by SPR to the results from the prior step decreases the NPV to *negative* $15.8 million.[30] Finally, when this latter result is further modified to correct book depreciation calculations and to employ conservative estimates of the lags that would exist between cash outflows and cash inflows, the model results generated an NPV of *negative* $33.4 million. Thus,

[29] The net present values that we calculate use the 15 percent cost of capital identified by SPR (February ExParte, SPR Model Description, page 16) as the discount rate.

[30] In this step, we assumed an SG&A ratio of 60 percent in Year 1, 50 percent in Year 2, 40 percent in Year 3, and 30 percent in Years 4 and 5.

even corrections to a small number of flaws that *can* be addressed within the TM structure are sufficient to drive both the internal rate of return and the NPV produced by the model negative.

72. If other significant flaws were corrected (*e.g.*, more realistic estimates of declining revenues to reflect competition, inclusion of the complete range of costs that a CLEC would incur to enter the market), NPV would be even more negative.

73. In conclusion, the TM is fundamentally flawed in so many important areas that it cannot provide meaningful support for the BellSouth/SPR position. Furthermore, correcting only a few of the flaws is sufficient to demonstrate that entry into the Atlanta LATA would not be profitable under the assumptions used in the TM. Correction of additional errors would result in NPVs that would be even more negative.

AFFIDAVIT OF
JOHN C. KLICK

I declare, under penalty of perjury, that the foregoing is true and correct. Executed on May 24, 1999.

John C. Klick

Notary Public

My Commission Expires: January 31, 2001

AFFIDAVIT OF
BRIAN F. PITKIN

I declare, under penalty of perjury, that the foregoing is true and correct. Executed on May 24, 1999.

Brian F. Pitkin

Notary Public

My Commission Expires: January 31, 2001

ATTACHMENT 1

CURRICULUM VITAE

OF

JOHN C. KLICK

EDUCATION

Bates College, Lewiston, Maine, 1970
Bachelor of Science - Mathematics

Department of Agriculture Graduate School, 1972
Graduate Courses in Operations Research

Loyola College, Baltimore, Maryland, 1973-1974
Graduate Courses in Accounting and Finance

EMPLOYMENT HISTORY

Southern Railway System, Washington, DC, 1970 - 1974
Management Trainee (Marketing Department)
Assistant Cost Analyst
Cost Analyst

R. L. Hines Associates, Inc., Washington, DC, 1974 - 1976
Transportation Economist

Snavely, King & Associates, Inc., Washington, DC, 1976
Consultant

Southern Railway System, Washington, DC, 1976 - 1978
Market Analyst, Coal and Construction Materials

United States Railway Association, Washington, DC, 1978 - 1980
Manager, Traffic and Operations Analysis
Assistant Director, Traffic and Operations Analysis
Deputy Director, Asset Valuation

Snavely, King & Associates, Inc., Washington, DC, 1980 - 1987
Senior Consultant
Vice President

Klick, Kent & Allen, Alexandria, Virginia, 1987 - Present
Principal

AFFIDAVIT OF KLICK AND PITKIN
DOCKET NO. 96-98

TELECOMMUNICATIONS TESTIMONY

Colorado

February 21, 1997	Docket No. 96S-331T. In the Matter of the Investigation and Suspension of Tariff Sheets Filed by U S WEST Communications, Inc., With Advice Letter No. 2617, Regarding Tariffs For Interconnection, Local Termination, Unbundling and Resale of Services, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
March 6, 1997	Docket No. 96S-331T. In the Matter of the Investigation and Suspension of Tariff Sheets Filed by U S WEST Communications, Inc., With Advice Letter No. 2617, Regarding Tariffs For Interconnection, Local Termination, Unbundling and Resale of Services, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
March 26, 1997	Docket No. 96S-331T. In the Matter of the Investigation and Suspension of Tariff Sheets Filed by U S WEST Communications, Inc., With Advice Letter No. 2617, Regarding Tariffs For Interconnection, Local Termination, Unbundling and Resale of Services, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
May 6, 1997	Docket No. 97M-063T. In the Matter of the Administration of the Colorado High Cost Fund and the Development of a Cost Model, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
May 23, 1997	Docket No. 97M-063T. In the Matter of the Administration of the Colorado High Cost Fund and the Development of a Cost Model, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
November 17, 1997	Docket No. 97M-063T. In the Matter of the Administration of the Colorado High Cost Fund and the Development of a Cost Model, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.

Public Service Commission of the District of Columbia

March 24, 1997	Formal Case No. 962. In the Matter of the Implementation of the District of Columbia Telecommunications Competition Act of 1996 and implementation of 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
May 2, 1997	Formal Case No. 962.. In the Matter of the Implementation of the District of Columbia Telecommunications Competition Act of 1996 and implementation of 47 U.S.C. Section 252 of the Telecommunications Act of 1996.

Florida Public Service Commission

November 13, 1997	Docket No. 960833-TP/960846-TP/971140-TP. In the matter of certain terms and conditions of proposed agreement concerning interconnection and resale, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.

Idaho Public Utilities Commission

November 22, 1996	Docket No. USW-T-96-15/ATT-T-96-2. In the Matter of the Interconnection Contract Negotiations Between AT&T Communications of the Mountain States, Inc., and U S WEST Communications, Inc., Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.

January 31, 1997	Docket No. USW-T-96-15/ATT-T-96-2. In the Matter of the Interconnection Contract Negotiations Between AT&T Communications of the Mountain States, Inc., and U S WEST Communications, Inc., Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.

State of Iowa Department of Commerce Utilities Board

October 7, 1996	Docket No. ARB-96-3. In the Matter of the Interconnection Contract Negotiations Between AT&T Communications of the Midwest, Inc., and GTE Communications, Inc. , Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
October 21, 1996	Docket No. ARB-96-3. In the Matter of the Interconnection Contract Negotiations Between AT&T Communications of the Midwest, Inc., and GTE Communications, Inc., Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
April 23, 1997	Docket No. RPU-96-9. Application for rehearing in part for purposes of Clarification and Correction, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
July 30, 1997	Docket No. RPU-96-9. . Application for rehearing in part for purposes of Clarification and Correction, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.

Kentucky Public Service Commission

November 4, 1997	Administrative Case No. 360. In the Matter of Inquiry Into Universal Service and Funding Issues, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.

Louisiana Public Service Commission

August 25, 1997	Docket No. U-22022. Review of cost studies submitted per Local Competition Regulations in order to determine the cost of interconnection and UNEs to establish reasonable, non-discriminatory, cost-based tariffed rates. U-22093. Review of tariff filing per Local Competition Regulations, which tariff introduces interconnection and unbundled services and establishes the rates, terms, and conditions for such service offerings, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
January 20, 1998	Docket No. U-20993, Subdocket A (above Dockets Consolidated), Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.

State of Maryland Public Service Commission

December 5, 1997	Case No. 8766. In the Matter of the Collocation Tariff Filed Under Transmittal No. 1003 by Bell Atlantic-Maryland, Inc., Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.

Minnesota Public Utilities Commission

September 30, 1996	Docket No. P-4Y2; YOT/M-96-936. In the Matter of the Interconnection Contract Negotiations Between AT&T Communications of the Midwest, Inc., and GTE Communications, Inc., Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
October 18, 1996	Docket No. P-442; 407/M-96-939. In the Matter of the Interconnection Contract Negotiations Between AT&T Communications of the Midwest, Inc., and GTE Communications, Inc., Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.

August 18, 1997	Docket Nos. P-42; 5321, 3167, 466, 421/CI-96-1540; OAH Docket No. 12-2500-10956-2. In the Matter of Generic Investigation of U S WEST Communications, Inc.'s Costs of Providing Interconnection and Unbundled Network Elements, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
October 20, 1997	Docket Nos. P-42; 5321, 3167, 466, 421/CI-96-1540; OAH Docket No. 12-2500-10956-2. In the Matter of Generic Investigation of U S WEST Communications, Inc.'s Costs of Providing Interconnection and Unbundled Network Elements, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
November 14, 1997	Docket No. P-442, 407, 5321, 466/CI-96-1541. In the Matter of the Investigation of GTE-Minnesota's Cost of Providing Interconnection and Unbundled Network Elements, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
December 19, 1997	Docket Nos. P-42; 5321, 3167, 466, 421/CI-96-1540; OAH Docket No. 12-2500-10956-2. In the Matter of Generic Investigation of U S WEST Communications, Inc.'s Costs of Providing Interconnection and Unbundled Network Elements, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
February 3, 1998	Docket Nos. P-999/M-97-909; OAH Docket No. 12-2500-11342-2. In the Matter of the State of Minnesota's Possible Election to Conduct its own Forward-Looking Economic Cost study to Determine the Appropriate Level of Universal Service Support, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
March 2, 1998	Docket Nos. P-42; 5321, 3167, 466, 421/CI-96-1540; OAH Docket No. 12-2500-10956-2. In the Matter of Generic Investigation of U S WEST Communications, Inc.'s Costs of Providing Interconnection and Unbundled Network Elements, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
March 23, 1998	Docket Nos. P-42; 5321, 3167, 466, 421/CI-96-1540; OAH Docket No. 12-2500-10956-2. In the Matter of Generic Investigation of U S WEST Communications, Inc.'s Costs of Providing Interconnection and Unbundled Network Elements, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
April 6, 1998	Docket Nos. P-42; 5321, 3167, 466, 421/CI-96-1540; OAH Docket No. 12-2500-10956-2. In the Matter of Generic Investigation of U S WEST Communications, Inc.'s Costs of Providing Interconnection and Unbundled Network Elements, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.
July 14, 1998	Docket Nos. P-42; 5321, 3167, 466, 421/CI-96-1540; OAH Docket No. 12-2500-10956-2. In the Matter of Generic Investigation of U S WEST Communications, Inc.'s Costs of Providing Interconnection and Unbundled Network Elements, Pursuant to 47 U.S.C. Section 252 of the Telecommunications Act of 1996.

Public Service Commission of Missouri

September 25, 1998	Docket TO-98-329. In the Matter of an Investigation into Various Issues Related to the Missouri Universal Service Fund.